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Gartner's Positions on the Five Hottest IT Topics and Trends in 2005

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Companies can no longer adopt a wait-and-see attitude regarding open-source software, voice/data convergence, service-oriented architecture, IT utility and global sourcing. Gartner's Positions cut through marketplace hype and confusion to drive responsible and informed adoption decisions.

ANALYSIS

This Special Report presents our positions on the top IT issues that our clients face. Our reports are designed to:

- Drive the market — We identify topics that clients have not yet recognized that will be incredibly important or disruptive to IT or the business during the next five years.
- Follow the market — We evaluate what is hitting mainstream IT to provide a single, coherent opinion to clients.
- Cut through the hype — We set the record straight on topics that are hot or highly hyped in the marketplace.

In this Special Report, we cover these top IT issues:

- Open-source software (OSS)
- Voice/data convergence
- Service-oriented architecture (SOA)
- IT utility
- Global sourcing

Two of the topics — voice/data convergence based on voice over Internet Protocol (VoIP) and SOA — represent inevitable and irrevocable shifts, creating common questions such as "When do I have to face up to this or end up left behind?" and "How do I actually get some business value out of this?" The other three — OSS, IT utility and global sourcing — bring additional choices to an already-complex IT environment and trigger anxieties regarding how far and fast the trends will grow, as well as when it would make economic sense for the companies to adopt them.

For each topic, Gartner takes a position that shows our view on its adoption and impact. We examine the key positions, drivers, implications, advice and alternate scenarios for each of these trends. We provide a high-level perspective to complement the rich and detailed analysis of IT industry trends, directions, markets, technology, vendors and best practices that is available in the broader set of written Gartner research.

Open-Source Software

OSS is a catalyst that will restructure the industry, producing higher-quality software at a lower cost. It won't destroy industry giants, such as IBM and Microsoft, but it will revolutionize software markets by moving revenue streams from license fees to services and support.

OSS strategies must address the unique characteristics of individual markets and the differences in open-source license models. Organizations must establish high-level policies and legal audit procedures regarding open-source licenses and the context in which these licenses should be used. Through 2010, OSS products will account for no more than 10 percent of the portfolio of Global 2000 companies, but by 2008, 95 percent of Global 2000 organizations will have formal open-source acquisition and management strategies that address the challenges and opportunities that OSS introduces. Organizations must firmly establish the preferred and trusted providers of OSS.

By 2008, OSS applications will directly compete with closed-source products in every software infrastructure market, and by 2010, Global 2000 IT organizations will consider open-source products in 80 percent of their infrastructure-focused software investments and 25 percent of business software investments. OSS will increase pressure on traditional vendors to more-aggressively innovate, improve quality and drive higher value. Organizations must establish how aggressively they will consider OSS, based on market maturity and the risk/reward proposition of specific products.

Open-source model benefits include an impact on the methodology and discipline that drive many open-source efforts and the ability to collaborate among companies to share R&D costs and leverage economies of scale. However, issues of intellectual property and trade secrets will necessitate a balance between the idealized open-source stewardship model and the need to maintain control and leverage certain technological aspects for competitive advantage. Organizations must determine their capacities for self-support and peer-based community support vs. establishing service and support contracts with open-source vendors.

Voice/Data Convergence

Voice/data convergence based on IP telephony and VoIP will be under way in more than 95 percent of major companies by 2010. Convergence will drive additional classes of communications-enabled business applications and cause the greatest upheaval in the telecommunications industry since its inception. Every major organization should at least be testing a converged network. However, users should not replace/upgrade the established LAN infrastructure if no definitive IP telephony plans are in place. Voice and data organizations should be merged to a single group or, at a minimum, report to the same manager.

Companies will struggle in the short term to make the financial business case, match the reliability and security of the time division multiplexing PBX, and reorganize to use the technology. By 2010, 40 percent of companies will have completed the convergence of their entire voice and data networks to a single network, and more than 95 percent of large and midsize companies will have started the process. When examining business impact, do not look at IP telephony solely as a replacement for the established telephone system. Rather, consider it a foundation to unify communications applications and assess how business and communications processes can be changed or integrated with IP telephony and collaborative applications. With a move to VoIP, reliability and availability typically improve for data but fall for voice because of the distributed nature of the environment.

WAN convergence using VoIP and Multiprotocol Label Switching will drastically affect the telecommunications industry, overturning virtually every legacy telecommunications policy and regulation. Combined with low barriers to entry to VoIP, we expect significant changes to the network service provider (NSP) landscape, with plenty of mergers and acquisitions. By 2009, half of the Tier 1 NSPs will have merged or been acquired. Through 2010, price decreases of 15 percent per year for data services and 7 percent to 15 percent for voice services can be expected. However, traffic growth of 30 percent to 60 percent means network budgets will grow 5 percent to 10 percent per year.

Service-Oriented Architecture

The latest step in the evolution of software SOA strives to provide simplicity and modularity. The following key characteristics set the SOA model apart from earlier efforts:

- Rich standards for defining and accessing services are becoming widely deployed.
- Modular services are combined at the time of execution.
- Understanding of the right scale and content of a service is growing.

SOA shifts developer focus from software to business functions, thereby transforming installed software from an inhibitor to a facilitator of rapid business change. Realizing these benefits will, however, require increased investment in software, infrastructure, skills and business process change. SOA will become the dominant framework for creating and delivering software, shifting value from packaged software to subscription services, and from monolithic suites to composite applications. By 2008, most application software revenue will come from products that were built using SOA, and by 2010, 80 percent of application software revenue growth, including licenses and subscription fees, will come from products based on SOA.

SOA will shift the focus from tools and packaged suites to modular offerings from multiple vendors that can be assembled and combined by a systems integrator. By 2008, SOA will provide the basis for 80 percent of development projects. By 2008, simple object database access plus service-oriented business applications (SOBAs) will enable Type A organizations to increase code reuse by more than 100 percent. The distinction between software integrators and vendors will blur because packaged applications will be broken up and delivered as SOBAs. By 2006, more than 60 percent of the $527 billion IT professional services market will be based on the exploitation of Web services standards and technology.

SOA and Web services will affect every business and IT department. Adoption strategies range from a minimalist approach, in which SOA is adopted by default while application and tool vendors shift products, to a radical, aggressive approach, in which the user aggressively seeks opportunities to take advantage of SOA. Between the extremes lies an integration-focused approach in which Web services are primarily used to ease the integration of internal systems with an externally focused model in which SOA is used to allow business partners and customers to interface. Users must examine the potential for the benefit of the business and the investment that will be needed in skills, processes and risk factors to determine which strategy is most appropriate.

IT Utility

IT-utility-style computing, based on real-time infrastructure (RTI) architecture, enables companies to fulfill IT business process, application and infrastructure requirements from "resource pools," rather than dedicated resources. By 2010, 25 percent of application demands will be delivered through RTI/IT utility, either in-house or from service providers, up from less than 5 percent currently. RTI and IT utility will shift hardware and maintenance labor budgets to software and software budgets from packaged licenses to pay-per-use models. Improving asset use (presently 10 percent to 20 percent) will reduce hardware spending. Large organizations can reduce IT hardware costs 10 percent to 30 percent and labor costs 30 percent to 60 percent while improving quality of service and increasing agility.

Through 2006, IT services governance will evolve to enable partial RTI functionality for homogeneous resources. Broader, more-heterogeneous RTI applications will emerge as intelligent instrumentation is implemented, and true root-cause analysis will become possible between 2007 and 2010. By 2008, 25 percent of U.S. businesses will use some type of IT utility, but many of the elements of RTI will drive more automated, efficient and cost-effective IT in five to 10 years.

External service providers that are using an IT utility model will be adept at presenting a low price per unit by using RTI, forcing internal IT to compete more aggressively. By 2010, 25 percent of application demands in the average Fortune 500 business will be fulfilled from shared, rather than dedicated, sources, and 30 percent of software will be delivered via an externally hosted pay-as-you-go model.

Global Sourcing

Global sourcing is an irreversible trend, rather than a cyclical shift, which would return to historical delivery models. By 2015, 30 percent of traditional professional IT services jobs will be delivered from emerging, rather than developed, markets. The political, economic and social ramifications of increased global sourcing will be enormous. The global sourcing of talent and intellect is economically compelling for a growing set of IT and business processes and part of a broader trend toward flexibility in delivery options.

By 2015, 30 percent of traditional professional IT services jobs will be delivered by people who come from emerging markets. India will continue to play a significant role, but by 2008, the most likely source of additional labor will include China, Russia and Brazil. Increasing demand for India's coveted talent pool will drive prices, and by 2008, labor rates for application-related services in India will rise 40 percent to 60 percent above 2004 rates. However, through 2008, differences in pricing for professional services between developed and emerging markets, such as India, will remain and be a factor in more than 70 percent of deals.

Global sourcing demands a focus on operational excellence and gives rise to the question of what roles and functions can be delivered in a remote or distributed fashion. It has the potential to fundamentally change many industries because each component of a business process is scrutinized for the optimal delivery model. In less than five years, the remote and virtual nature of global delivery will force the decoupling of business process and applications, which will give rise to selective business process utilities.

IT budgets will make a dramatic shift from being dominated by infrastructure and other asset-intensive line items to significant spending on external sourcing and the development of internal sourcing competencies (for example, governance and relationship management). Sourcing strategies must include a systematic evaluation of global resource options, and governance must become a core competency of any IT department.

Features

"Positions 2005: Open-Source Solutions Will Restructure the Software Industry" — IT organizations and technology vendors shouldn't ignore the potential threats and opportunities of open-source software. **By Mark Driver**

"Positions 2005: Voice and Data Will Converge Onto a Single Network via IP Telephony and Voice Over IP" — The long-promised convergence of voice and data on a single network is finally becoming a reality. **By Bob Hafner**

"Positions 2005: Service-Oriented Architecture Adds Flexibility to Business Processes" — Through 2015, SOA will transform software from an inhibitor to an enabler of business change. **By Simon Hayward**

"Positions 2005: Real-Time Infrastructure and IT Utility Redefine Delivery Models" — One-fourth of applications will be delivered by IT-utility-style computing. **By Ben Pring and Donna Scott**

"Positions 2005: Global Sourcing and the Impact of New Delivery Models on IT Services" — Market segments will continue to change during the next 10 years. **By Fran Karamouzis**

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